

UNITED STATES DEPARTMENT OF THE INTERIOR  
MINERALS MANAGEMENT SERVICE  
GULF OF MEXICO REGION

# ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: **11-JUN-2007** TIME: **0230** HOURS

2. OPERATOR: **Anadarko Petroleum Corporation**

REPRESENTATIVE: **Michael Cowan**

TELEPHONE: **(832) 636-8786**

CONTRACTOR:

REPRESENTATIVE:

TELEPHONE:

3. OPERATOR/CONTRACTOR REPRESENTATIVE/SUPERVISOR  
ON SITE AT TIME OF INCIDENT:

4. LEASE: **G22987**

AREA: **GC** LATITUDE:

BLOCK: **680** LONGITUDE:

5. PLATFORM: **A (Constitution**

RIG NAME:

6. ACTIVITY: ☐ EXPLORATION (POE)  
☒ DEVELOPMENT/PRODUCTION  
(DOCD/POD)

7. TYPE:

☐ HISTORIC INJURY

- ☐ REQUIRED EVACUATION
- ☐ LTA (1-3 days)
- ☐ LTA (>3 days)
- ☐ RW/JT (1-3 days)
- ☐ RW/JT (>3 days)
- ☐ Other Injury

- ☐ FATALITY
- ☐ POLLUTION
- ☒ FIRE
- ☒ EXPLOSION

- LWC ☐ HISTORIC BLOWOUT
- ☐ UNDERGROUND
  - ☐ SURFACE
  - ☐ DEVERTER
  - ☐ SURFACE EQUIPMENT FAILURE OR PROCEDURES

COLLISION ☐ HISTORIC ☐ >\$25K ☐ <=\$25K

- ☐ STRUCTURAL DAMAGE
- ☐ CRANE
- ☐ OTHER LIFTING DEVICE
- ☐ DAMAGED/DISABLED SAFETY SYS.
- ☒ INCIDENT >\$25K **Flash gas**
- ☐ H2S/15MIN./20PPM **compressor/engine**
- ☒ REQUIRED MUSTER
- ☒ SHUTDOWN FROM GAS RELEASE
- ☐ OTHER

6. OPERATION:

- ☒ PRODUCTION
- ☐ DRILLING
- ☐ WORKOVER
- ☐ COMPLETION
- ☐ HELICOPTER
- ☐ MOTOR VESSEL
- ☐ PIPELINE SEGMENT NO.
- ☐ OTHER

8. CAUSE:

- ☒ EQUIPMENT FAILURE
- ☐ HUMAN ERROR
- ☐ EXTERNAL DAMAGE
- ☐ SLIP/TRIP/FALL
- ☐ WEATHER RELATED
- ☒ LEAK
- ☐ UPSET H2O TREATING
- ☐ OVERBOARD DRILLING FLUID
- ☐ OTHER \_\_\_\_\_

9. WATER DEPTH: **4970** FT.

10. DISTANCE FROM SHORE: **150** MI.

11. WIND DIRECTION: **SE**  
SPEED: **2** M.P.H.

12. CURRENT DIRECTION: **W**  
SPEED: **1** M.P.H.

13. SEA STATE: **2** FT.

17. INVESTIGATION FINDINGS:

A fire occurred at Green Canyon Block 680, Platform A (Constitution) when the No. 1 Compressor caught fire. At approximately 0205 hours, a reducer coupling, which connected a 1/2 inch ball valve to the No. 1 3rd stage volume bottle, parted in the thread section and the valve began leaking gas. The gas was heard by the night crew who then began looking for the leak. The escaping gas contacted an ignition source in the engine air intake and ignited. This caused a backfire strong enough to remove air cleaners from their housing which was able to be heard across the platform. The platform Emergency Shut Down (ESD) was activated. All personnel were made aware of the situation and were instructed to report to their muster stations. At approximately 0210 hours, the fire was suppressed and extinguished using the onboard fire hose system and the deluge system.

18. LIST THE PROBABLE CAUSE(S) OF ACCIDENT:

The cause of this incident was determined to be a fatigue fracture of the ball valve caused by vibration over time.

19. LIST THE CONTRIBUTING CAUSE(S) OF ACCIDENT:

The ball valve is oversized with respect to weight and is also rated for pressures that are not physically achievable with this type of compressor.

20. LIST THE ADDITIONAL INFORMATION:

Since the fire, Anadarko has determined that the ball valve is not needed and that a simple plug will be sufficient. This would reduce the weight stress on the reducer coupling and reduce stress from vibration.

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

Flash Gas Compressor and associated  
Caterpillar engine

Needs to be replaced

ESTIMATED AMOUNT (TOTAL): \$75,000

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

Due to the specific nature of this incident, the Houma District has no recommendations to report to the Regional Office of Safety Management.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: NO

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

None

25. DATE OF ONSITE INVESTIGATION:

NO

26. ONSITE TEAM MEMBERS:

**Amy Wilson /**

29. ACCIDENT INVESTIGATION

PANEL FORMED:

30. DISTRICT SUPERVISOR:

OCS REPORT:

**Michael J. Saucier**

APPROVED

DATE:

**24-JUL-2007**

# FIRE/EXPLOSION ATTACHMENT

1. SOURCE OF IGNITION: **Engine Air Intake**

2. TYPE OF FUEL: ☒ GAS  
☐ OIL  
☐ DIESEL  
☐ CONDENSATE  
☐ HYDRAULIC  
☐ OTHER

3. FUEL SOURCE: **#1 Compressor 3rd Stage Volume Bottle**

4. WERE PRECAUTIONS OR ACTIONS TAKEN TO ISOLATE  
KNOWN SOURCES OF IGNITION PRIOR TO THE ACCIDENT ? **NO**

5. TYPE OF FIREFIGHTING EQUIPMENT UTILIZED: ☐ HANDHELD  
☐ WHEELED UNIT  
☐ FIXED CHEMICAL  
☒ FIXED WATER  
☐ NONE  
☐ OTHER

